

What is claimed is:

1. A saber saw comprising:

a housing for accommodating a motor;

5 a driven shaft rotatably supported by said housing and
rotated by said motor;

a plunger capable of reciprocative motion with respect
to said housing and having a front end to which a saw blade is
attached, the plunger extending in its axial direction;

10 a first motion converting mechanism interposed between
said driven shaft and said plunger for converting rotational
motion of said driven shaft into the reciprocative motion of
said plunger;

a counterweight causing reciprocative motion with re-
spect to said housing;

15 a second motion converting mechanism interposed between
said driven shaft and said counterweight for converting the
rotational motion of said driven shaft into the reciprocative
motion of said counterweight;

20 a guide sleeve extending in the axial direction of the
plunger;

a swing roller movable along the guide sleeve and recip-
rocally movable together with the plunger;

25 a pivot member extending in a direction perpendicular to
the guide sleeve, the guide sleeve being pivotally movable
about an axis of the pivot member; and

means for pivoting the guide sleeve within a predetermined angle about the axis of the pivot member.

2. The saber saw as claimed in claim 1, wherein the guide sleeve is pivoted within a range of a pivot angle of
5 from 0.44 degrees to 1.54 degrees.

3. The saber saw as claimed in claim 1, wherein a product of mass and reciprocally moving stroke of the counterweight is substantially identical with that of the plunger.

4. The saber saw as claimed in claim 1, wherein the
10 guide sleeve is formed with an elongated hole extending in the axial direction thereof;

and wherein the plunger includes a roller shaft extending through the elongated hole;

and wherein the swing roller comprises a first swing
15 roller connected to one end of the roller shaft, and a second swing roller connected to another end of the roller shaft.

5. The saber saw as claimed in claim 4, wherein the elongated hole has a width slightly greater than a diameter of the roller shaft.

20 6. The saber saw as claimed in claim 1, further comprising a change shaft selectively engageable with the housing for preventing the guide sleeve from its pivoting motion, and selectively disengagable from the housing for permitting the guide sleeve to be pivotally moved.

25 7. A saber saw comprising:

a housing for accommodating a motor;

a driven shaft rotatably supported by said housing and rotated by said motor;

5 a plunger capable of reciprocative motion with respect to said housing and having a front end to which a saw blade is attached, the plunger extending in its axial direction;

10 a first motion converting mechanism interposed between said driven shaft and said plunger for converting rotational motion of said driven shaft into the reciprocative motion of said plunger;

a counterweight causing reciprocative motion with respect to said housing;

15 a second motion converting mechanism interposed between said driven shaft and said counterweight for converting the rotational motion of said driven shaft into the reciprocative motion of said counterweight;

a guide sleeve extending in the axial direction of the plunger;

20 a swing roller movable along the guide sleeve and reciprocally movable together with the plunger;

a pivot member extending in a direction perpendicular to the guide sleeve; and

25 a moving mode changing means for changing a moving mode of the guide sleeve between a first moving mode for pivotally moving the guide sleeve about an axis of the pivot member

within a predetermined pivot angle and a second moving mode for preventing the guide sleeve from being pivotally moved about the pivot member.

8. The saber saw as claimed in claim 7, wherein the guide sleeve is pivoted within a range of pivot angle of from 0.44 degrees to 1.54 degrees in the first moving mode.

9. A saber saw comprising:

a housing for accommodating a motor;

a driven shaft rotatably supported by said housing and rotated by said motor;

a plunger capable of reciprocative motion with respect to said housing and having a front end to which a saw blade is attached, the plunger extending in its axial direction;

a first motion converting mechanism interposed between said driven shaft and said plunger for converting rotational motion of said driven shaft into the reciprocative motion of said plunger;

a counterweight causing reciprocative motion with respect to said housing, the counterweight providing a first track and a second track each extending in an reciprocating direction of the plunger;

a second motion converting mechanism interposed between said driven shaft and said counterweight for converting the rotational motion of said driven shaft into the reciprocative motion of said counterweight; and

a swing roller reciprocally movable together with the plunger along the extending direction of the first and second tracks, a combination of the first track, the second track and the swing roller selectively providing one of a first mode in which the swing roller is reciprocally moved out of contact from the first track and the second track, a second mode in which the swing roller is reciprocally moved in contact with the first track, and a third mode in which the swing roller is reciprocally moved in contact with the second track.

10 10. The saber saw as claimed in claim 9, wherein a product of mass and reciprocally moving stroke of the counterweight is substantially identical with that of the plunger.

15 11. The saber saw as claimed in claim 9, wherein the first track and the second track have longitudinal lengths extending in the axial direction of the plunger, each length being greater than a sum of reciprocally moving strokes of the plunger and the counterweight.

12. A saber saw comprising:

a housing for accommodating a motor;

20 a driven shaft rotatably supported by said housing and rotated by said motor;

a plunger capable of reciprocative motion with respect to said housing and having a front end to which a saw blade is attached, the plunger extending in its axial direction;

25 a first motion converting mechanism interposed between

said driven shaft and said plunger for converting rotational motion of said driven shaft into the reciprocative motion of said plunger;

5 a counterweight causing reciprocative motion with respect to said housing;

a second motion converting mechanism interposed between said driven shaft and said counterweight for converting the rotational motion of said driven shaft into the reciprocative motion of said counterweight;

10 a guide sleeve extending in the axial direction of the plunger and pivotally movable; and

a swing roller movable along the guide sleeve and reciprocally movable together with the plunger, a combination of the plunger and the guide sleeve selectively providing one of
15 a first mode in which the plunger is linearly reciprocally movable along the guide sleeve and a second mode in which the plunger is pivotally moved within a pivot angle ranging from 0.44 degrees to 1.54 degrees upon pivotal movement of the guide sleeve.

20 13. The saber saw as claimed in claim 12, wherein the guide sleeve is formed with an elongated hole extending in the axial direction thereof;

and wherein the plunger includes a roller shaft extending through the elongated hole;

25 and wherein the swing roller comprises a first swing

roller connected to one end of the roller shaft, and a second swing roller connected to another end of the roller shaft.

14. The saber saw as claimed in claim 12, wherein the elongated hole has a width slightly greater than a diameter of the roller shaft.

15. The saber saw as claimed in claim 12, further comprising a change shaft selectively engageable with the housing for preventing the guide sleeve from its pivotal movement, and selectively disengagable from the housing for permitting the guide sleeve to be pivotally moved.